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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/785,464
Filing Date: February 24, 2004
Appellant(s): TAMBURRO ET AL.

Gary J. Foose
For Appellant

**SUPPLEMENTAL
EXAMINER'S ANSWER**

This is in response to the appeal brief filed July 26, 2007 appealing from the Office action mailed October 18, 2006. Additionally, this response includes all obviousness-type double patenting rejections of record in response to the remand from the Board sent May 22, 2009.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows:

(i) An obviousness-type double patenting rejection was made and not presented by appellant. Claims 1-12 are provisionally rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claims 1-10 of copending Application No. 10/785277 in view of Kellenberger et al. (US 4,699,823),

(ii) Claims 1-12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U. S. Patent No. 6,887,564 in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569) , and

(iii) Claims 1-6, 8, 9, 11, and 12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 11/021,634 in view of Kellenberger et al. (U.S. Patent No. 4,699,823).

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6833487	Pesce	12-2004
6867287	Carlucci	3-2005
6887564	Gagliardini	5-2005
20050154364	Carlucci	7-2005
5496933	Kelkenberg	3-1996
5635569	Sackmann	6-1997
4699823	Kellenberger	10-1987

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kelkenberg (U.S. Patent No. 5,496,933) in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569).

With regard to claims 1, 2, and 6, Kelkenberg teaches providing chitosan salts as powder in hygienic articles. (See Col 4, lines 20-24) Kelkenberg teaches the particles may be water soluble. (See Col 3, lines 35-47) Kelkenberg discloses that the particle sizes are much less than 1 mm (See Col 2, line 25) and that some particles are smaller than 1 micron (See Col 2, lines 26-27).

Although the reference discloses using particles smaller than 1 micron, Kelkenberg does not specifically teach the average particle size to be less than 300 microns, article.

Kelkenberg is also silent as to the structure of the hygienic article.

Kellenberger et al. teach a diaper material comprising a topsheet, backsheet, and absorbent core comprising superabsorbent particle material. (See Figure 2 and Abstract) The absorbent core is hydrophilic (See Col 4, line 43) and the fibers of the core material would comprise the claimed "absorbent member." Kellenberger et al. teaches that the superabsorbent particles in the outer region of the core should have particles averaging less than 300 microns in size. (See Col 6, lines 47-49)

Sackmann et al. also teach that smaller particle sizes in superabsorbent materials allows for more rapid liquid intake (See Col 3, lines 44-48).

While Kelkenberg is silent as to the construction of an absorbent article comprising the superabsorbent particles, it would have been obvious to a person having ordinary skill in the art at the time of the invention to use the Kelkenberg chitosan salt particles at the average size of 300 microns or less in a diaper structure taught by Kellenberger et al. and to place those particles in the region adjacent the backsheet in order to provide a diaper

with rapid intake towards the bottom of the core, as taught by both Kellenberger et al. and Sackmann et al.

Regarding the limitation of a continuous and homogeneous region of sprayed on layer of particles of chitosan material that spans across void spaces on or within the absorbent member, the structure of the absorbent particles within Kellenberger et al. meet this limitation. (See Figure 3) Kellenberger et al. discloses particles of superabsorbent material are distributed within the absorbent material layer, and these superabsorbent particles are disposed to form a substantially continuous layer. (See Col 3, lines 5-11) Kellenberger et al. also teaches the particles are uniformly distributed across the length and width of the core material. (Col 5, lines 47-54) It is additionally noted that the Merriam-Webster dictionary defines homogeneous as being of uniform structure or composition throughout. Further, it is noted that appellant discloses the individual particles are in such close contact to each other, such that a substantially continuous and homogenous layer of chitosan material is created. (See pg. 13, lines 20-24) Therefore, it would have been obvious to one of ordinary skill in the art to optimize the distribution of the superabsorbent particles to form a substantially continuous layer for the purpose of preventing liquid run-off and leakage. (See Col 6, 25-30) The limitation that the particles are sprayed on is merely a process of making limitation in a product claim.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process

claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Kellenberger et al. teach the particles are distributed in a concentration gradient in the direction of the thickness of the batt (column 5, lines 38-41). Additionally, Kellenberger et al. also disclose that the particles are uniformly distributed across the length and width of the core material (column 5, lines 47-54). Thus, the particles would be present within the void spaces both on and within the fibrous batt and would also cover the fibers (i.e. constituents of the absorbent material).

Regarding the limitation of the chitosan material being soluble in 100 grams of water at 25 degrees C and one atmosphere, although Kelkenberg does not explicitly teach the limitation of solubility in those terms, it is reasonable to presume that said limitations are inherent to the invention. Support for said presumption is found in the use of similar materials and methods. It is noted by examiner that appellant discloses typical chitosan materials for use have a molecular weight preferably between 2,000 to 1,000,000. (See pg. 10, lines 3-5) Also, appellant discloses that a variety of acids (i.e. formic acid and glycolic acid) can be used for forming chitosan salts. (See pg. 10, lines 28-29 and pg. 11, lines 7-17) Additionally, appellant discloses suitable chitosan salts formed include chitosan hydrochloride, chitosan glycolate, chitosan lactate, and mixtures thereof which may include salts using a mixture of acids, both inorganic and organic. (See pg. 11, lines 19-27) In the working examples, appellant discloses the use of chitosan lactate. (See pg.

27, lines 15-19) Kelkenberg explicitly teaches the use of commercially available chitosan containing 20% of acetylated amino groups having a molecular weight of 300,000 to 500,000. (See Col 2, 46-50) The commercially available chitosan should be employed as far as possible in the ground state with a particle size of $\leq 500 \mu\text{m}$. (See Col 3, lines 4-6) The chitosan is mixed with acid in order to make it soluble in cold water. (See Col 3, lines 29-42) Additionally, Kelkenberg discloses in Examples 1 and 3, Chitosan HCL Salt soluble in cold water (See Col 5, lines 40-52) and Chitosan Glycolic Acid Salt soluble in cold water thereby giving a clear solution. (See Col 6, lines 1-10) Kelkenberg also discloses that the use of hydroxy acids, such as lactic acid and glycolic acid form glass-clear gels in water. (See Col 3, lines 43-47) As such, the materials and methods of Kelkenberg have been shown to be the similar to that of appellant, the property of 100 grams of chitosan material being soluble in water at one atmosphere is inherently provided in the Kelkenberg product. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594.

In the alternative, the claimed solubility would obviously have been provided by the process disclosed by Kelkenberg (See Col 3, lines 28- 58).

Modified Kelkenberg discloses all of the claim limitations as set forth above.

With regard to claims 3, 4, 11, and 12, one can see about 100% of the back surface of the diaper in Kellenberger et al. is covered by regions of superabsorbent particles (Figures 2-4 and 6).

With regard to claim 5, Kellenberger et al. show additional layers & tissue sheets may be added (See Col 4, lines 45-47).

With regard to claim 7, Kelkenberg teaches only 20% of the chitin is acetylated (See Col 2, lines 46-48).

With regard to claim 8, Kelkenberg teaches the chitosan can be mixed with lactic acid (See Col 4, line 16).

With regard to claim 9, Kellenberger et al. teach the fibrous core batt is air-formed (See Col 4, lines 43-44).

With regard to claim 10, Kellenberger et al. teach the superabsorbent should be present in an amount between 12 and 15% by weight of the batt. Thus, the claimed amount of 0.1 to 200 g/m² of superabsorbent particles would be met so long as a person of ordinary skill in the art used an absorbent core that weighed between 0.8 and 1,333 g/m². It would have been obvious to a person having ordinary skill in the art at the time of the invention to use between of 0.1 to 200 g/m² of superabsorbent particles in the absorbent core of Kellenberger et al., since such range is so broad that practicing outside of it would make it impractical to actually produce an absorbent article.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d

1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Omum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969). A timely filed terminal disclaimer in compliance with 37 CFR 1.321 (c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b). Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No.

6,833,487 in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569).

The claims of the '487 Patent disclose an absorbent member containing chitosan salt particles. With regard to claims 1,2, and 6, the '487 Patent claims a disposable article having a topsheet, backsheet, and absorbent core having chitosan salt. Although the claims are silent as to the size of the particles and the placement in the layers, Kellenberger et al. teaches that the superabsorbent particles in the outer region of the core should have particles averaging less than 300 microns in size (See Col 6, lines 47-49). Sackmann et al. also teach that smaller particle sizes in superabsorbent materials allows for more rapid liquid intake (See Col 3, lines 44-48).

It would have been obvious to a person having ordinary skill in the art at the time of the invention to use chitosan salt particles at the size of 300 microns or less in the region

adjacent the backsheet in order to provide a diaper with rapid intake towards the bottom of the core, as taught by both Kellenberger et al. and Sackmann et al.

Regarding the limitation of chitosan solubility in water, such a property would be inherent to the chitosan salts claimed in the '487 Patent since the patent claims chitosan salt known to be soluble in water (claims 5 and 15) and since claim 8 of the present invention discloses that chitosan salts meet the limitation. The burden is upon Appellant to prove otherwise.

With regard to claims 3, 4, 11, and 12, one can see about 100% of the back surface of the diaper in Kellenberger et al. is covered by regions of superabsorbent particles (Figures 2-4 and 6).

With regard to claim 5, Kellenberger et al. show additional layers of tissue sheets may be added (See Col 4, lines 45-47).

With regard to claim 7, see claim 4 of the '487 Patent. With regard to claim 8, see claims 5 and 15 of the '487 Patent.

With regard to claim 9, Kellenberger et al. teach the fibrous core batt is air-formed (See Col 4, lines 43-44).

With regard to claim 10, see claim 14 of the '487 Patent.

Claims 1-12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-24 of U. S. Patent No. 6,867,287 in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569)

With regard to claims 1, 2, and 6, the '287 Patent claims a disposable article having a topsheet, backsheet, and absorbent core having chitosan salt in an amount of 0.5 to 500 grams (claim 1). Although the claims are silent as to the size of the particles and the placement in the layers, Kellenberger et al. teaches that the superabsorbent particles in the outer region of the core should have particles averaging less than 300 microns in size. (See Col 6, lines 47- 49) Sackmann et al. also teach that smaller particle sizes in superabsorbent materials allows for more rapid liquid intake. (See Col 3, lines 44-48)

It would have been obvious to a person having ordinary skill in the art at the time of the invention to use chitosan salt particles at the size of 300 microns or less in the region adjacent the backsheet in order to provide a diaper with rapid intake towards the bottom of the core, as taught by both Kellenberger et al. and Sackmann et al.

Regarding the limitation of chitosan solubility in water, such a property would be inherent to the chitosan salts claimed in the '287 Patent since the patent claims chitosan salt known to be soluble in water (claim 4) and since claim 8 of the present invention discloses that chitosan salts meet the limitation. The burden is upon Appellant to prove otherwise.

With regard to claims 3, 4, 11, and 12, one can see about 100% of the back surface of the diaper in Kellenberger et al. is covered by regions of superabsorbent particles (Figures 2-4 and 6).

With regard to claim 5, Kellenberger et al. show additional layers of tissue sheets may be added (See Col 4, lines 45-47).

With regard to claim 7, see claim 2 of the '287 Patent.

With regard to claim 8, see claim 4 of the '287 Patent.

With regard to claim 9, Kellenberger et al. teach the fibrous core batt is air-formed (See Col 4, lines 43-44).

With regard to claim 10, see claim 1 of the '287 Patent.

Claims 1-12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U. S. Patent No. 6,887,564 in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569)

With regard to claims 1, 2, and 6, the '564 Patent claims a disposable article having a topsheet, backsheet, and absorbent core having chitosan salt (claim 3). Although the claims are silent as to the size of the particles and the placement in the layers, Kellenberger et al. teaches that the superabsorbent particles in the outer region of the core

should have particles averaging less than 300 microns in size (See Col 6, lines 47-49).

Sackmann et al. also teach that smaller particle sizes in superabsorbent materials allows for more rapid liquid intake (See Col 3, lines 44-48).

It would have been obvious to a person having ordinary skill in the art at the time of the invention to use chitosan salt particles at the size of 300 microns or less in the region adjacent the backsheet in order to provide a diaper with rapid intake towards the bottom of the core, as taught by both Kellenberger et al. and Sackmann et al.

Regarding the limitation of chitosan solubility in water, such a property would be inherent to the chitosan salts claimed in the '564 Patent since the patent claims chitosan salt known to be soluble in water (claim 8) and since claim 8 of the present invention discloses that chitosan salts meet the limitation. The burden is upon Appellant to prove otherwise.

With regard to claims 3, 4, 11, and 12, one can see about 100% of the back surface of the diaper in Kellenberger et al. is covered by regions of superabsorbent particles (Figures 2-4 and 6).

With regard to claim 5, Kellenberger et al. show additional layers of tissue sheets may be added (See Col 4, lines 45-47).

With regard to claim 7, see claim 4 of the '564 Patent.

With regard to claim 8, see claim 8 of the '564 Patent.

With regard to claim 9, Kellenberger et al. teach the fibrous core batt is air-formed (See Col 4, lines 43-44).

With regard to claim 10, see claim 10 of the '564 Patent.

Claims 1-12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of copending Application No. 10/785,277 in view of Kellenberger et al. (U.S. Patent No. 4,699,823)

With regard to claims 1, 2, and 6, the '277 Application claims an absorbent member with chitosan salts having similar particle diameter and solubility. The '277 Application does not disclose the presence of a topsheet or a backsheet. Kellenberger et al. teach that absorbent core material comprising absorbent particles should be sandwiched between a topsheet and a backsheet in order to form a diaper. It would have been obvious to a person having ordinary skill in the art at the time of the invention to use the absorbent core of the '277 Application between a topsheet and a backsheet in order to form a diaper, as taught by both Kellenberger et al.

With regard to claims 3, 4, 11, and 12, see claim 10 of the '277 Application.

With regard to claim 5, Kellenberger et al. show additional layers of tissue sheets may be added (column 4, lines 45-47).

With regard to claim 7, see claim 5 of the '277 Application.

With regard to claim 8, see claim 6 of the '277 Application.

With regard to claim 9, see claim 7 of the '277 Application.

With regard to claim 10, see claim 8 of the '277 Application.

Claims 1-6, 8, 9, 11, and 12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 11/021,634 in view of Kellenberger et al. (U.S. Patent No. 4,699,823)

With regard to claims 1, 2, and 6, the '634 Application claims an absorbent member with chitosan salts having similar particle diameter. The '634 Application does not disclose the presence of a topsheet or a backsheet. Kellenberger et al. teach that absorbent core material comprising absorbent particles should be sandwiched between a topsheet and a backsheet in order to form a diaper.

It would have been obvious to a person having ordinary skill in the art at the time of the invention to use the absorbent core of the '634 Application between a topsheet and a backsheet in order to form a diaper, as taught by both Kellenberger et al.

Regarding the limitation of chitosan solubility in water, such a property would be inherent to the chitosan salts claimed in the '634 Application since the patent claims chitosan salt known to be soluble in water (claim 4) and since claim 8 of the present invention discloses that chitosan salts meet the limitation.

With regard to claims 3, 4, 11, and 12, one can see about 100% of the back surface of the diaper in Kellenberger et al. is covered by regions of superabsorbent particles (Figures 2-4 and 6).

With regard to claim 5, Kellenberger et al. show additional layers of tissue sheets may be added (See Col 4, lines 45-47).

With regard to claim 8, see claim 4 of the '634 Application.

With regard to claim 9, Kellenberger et al. teach the fibrous core batt is air- formed (See Col 4, lines 43-44).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

(10) Response to Arguments

Appellant's arguments filed July 26, 2007 in the Appeal Brief have been fully considered for claims 1-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Kelkenberg (U.S. Patent No. 5,496,933) in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569) but they are not persuasive.

Appellant traverses the rejection for two reasons. First, the references, when combined, fail to teach or suggest a continuous and homogeneous region of chitosan.

Regarding the limitation of a continuous and homogeneous region, appellant's arguments are not found persuasive.

Claim 1 of the present invention requires that the continuous and homogenous region be formed of particles of chitosan having a mean diameter of not more than 300 microns. As the claim size requirements are met by the prior art, the powder can be equated to Appellant's particles. Kellenberger et al. meet the claim limitation for a continuous and homogenous region of chitosan because the reference clearly shows superabsorbent particles uniformly present on the surface layer of the absorbent core. (See Figures 2 and 3) Additionally, Kellenberger et al. discloses particles of superabsorbent material are distributed within the absorbent material layer, and these superabsorbent particles are disposed to form a substantially continuous layer. (See Col 3, lines 5-11) Kellenberger et al. also teaches the particles are uniformly distributed across the length and width of the core material. (See Col 5, lines 47-54) It is additionally noted that the Merriam-Webster dictionary defines homogeneous as being of uniform structure or composition throughout. Further, it is noted that appellant discloses the individual particles are in such close contact to each other, such that a substantially continuous and homogenous layer of chitosan material is created. (See pg. 13, lines 20-24) Therefore, Appellant's arguments are not germane to the fact that the superabsorbent particles are uniformly distributed and found in close contact to each other touching and not. (See Figure 3) Further, it is noted that appellant discloses leakage reduction and improved retention at reduced consumption of chitosan material. (See pg.4, lines 13-15) Kellenberger et al. discloses a lower

concentration of superabsorbent wherein liquid run-off and leakage are reduced. (See Col 6, 25-30) Therefore, the references combined suggest a continuous and homogeneous region of chitosan there being no weight given to the process since the product is prima facie case obviousness over the combined references. Finally, the combination of the references provides for substantially similar improved fluid retention characteristics as that of appellant's product.

Second, Appellants argue the Office Action fails to identify portions of Kelkenberg, Kellenberger et al., and Sackmann et al., that when combined, teach or suggest a chitosan material wherein 1 gram of the chitosan material is soluble in 100 grams of water at 25°C and one atmosphere.

Regarding the limitation of the chitosan material being soluble in 100 grams of water at 25 °C and one atmosphere, appellant's arguments are not found persuasive. Although Kelkenberg does not explicitly teach the limitation of solubility in those terms, it is reasonable to presume that said limitations are inherent to the invention. Support for said presumption is found in the use of similar materials and methods. It is noted by examiner that appellant discloses typical chitosan materials for use have a molecular weight preferably between 2,000 to 1,000,000. (See pg. 10, lines 3-5) Also, appellant discloses that a variety of acids (i.e. formic acid and glycolic acid) can be used for forming chitosan salts. (See pg. 10, lines 28-29 and pg. 11, lines 7-17) Additionally, appellant

discloses suitable chitosan salts formed include chitosan hydrochloride, chitosan glycolate, chitosan lactate, and mixtures thereof which may include salts using a mixture of acids, both inorganic and organic. (See pg. 11, lines 19-27) In the working examples, appellant discloses the use of chitosan lactate. (See pg. 27, lines 15-19) Kelkenberg explicitly teaches the use of commercially available chitosan containing 20% of acetylated amino groups having a molecular weight of 300,000 to 500,000. (See Col 2, 46-50) The commercially available chitosan should be employed as far as possible in the ground state with a particle size of $\leq 500 \mu\text{m}$. (See Col 3, lines 4-6) The chitosan is mixed with acid in order to make it soluble in cold water. (See Col 3, lines 29-42) Additionally, Kelkenberg discloses in Examples 1 and 3, Chitosan HCL Salt soluble in cold water (See Col 5, lines 40-52) and Chitosan Glycolic Acid Salt soluble in cold water thereby giving a clear solution. (See Col 6, lines 1-10) Kelkenberg also discloses that the use of hydroxy acids, such as lactic acid and glycolic acid form glass-clear gels in water. (See Col 3, lines 43-47) As such, the materials and methods of Kelkenberg have been shown to be the similar to that of appellant, the property of 100 grams of chitosan material being soluble in water at one atmosphere is inherently provided in the Kelkenberg product. The burden is upon the Appellant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. Finally, Appellant has failed to provide any evidence to support Appellant's assertion that prior art does not inherently teach the claimed property.

Double Patenting

U.S. Patent No. 6,833,487 in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569)

Claims 1-12 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No.

6,833,487 in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569)

The Appellants submit that Claim 1 is patentable over Claims 1-15 of U.S. Patent No. 6,833,487 in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569) because the references, when combined, fail to teach or suggest an absorbent member comprising at least one continuous and homogeneous region of chitosan material wherein at least 1 gram of said chitosan material is soluble in 100 grams of water at 25°C and one atmosphere.

Regarding the limitation of the chitosan material being soluble in 100 grams of water at 25 °C and one atmosphere to form a continuous and homogeneous region, appellant's arguments are not found persuasive as set forth above. However, claim 8 of the present invention indicates that chitosan salts meet this limitation. Since the '487 Application is directed to chitosan salts in claim 5, it is reasonable to presume this limitation is inherent

to that invention. Support for said presumption is found in the use of similar materials and methods. Kelkenberg explicitly teaches the use of commercially available chitosan containing 20% of acetylated amino groups having a molecular weight of 300,000 to 500,000. (See Col 2, 46-50) The commercially available chitosan should be employed as far as possible in the ground state with a particle size of $\leq 500 \mu\text{m}$. (See Col 3, lines 4-6) The chitosan is mixed with acid in order to make it soluble in cold water. (See Col 3, lines 29-42) Additionally, Kelkenberg discloses in Examples 1 and 3, Chitosan HCL Salt soluble in cold water (See Col 5, lines 40-52) and Chitosan Glycolic Acid Salt soluble in cold water thereby giving a clear solution. (See Col 6, lines 1-10) Kelkenberg also discloses that the use of hydroxy acids, such as lactic acid and glycolic acid form glass-clear gels in water. (See Col 3, lines 43-47) As such, the materials and methods of Kelkenberg have been shown to be similar to that of '487 Patent, the property of 100 grams of chitosan material being soluble in water at one atmosphere is inherently provided in the Kelkenberg product. The burden is upon the Appellant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. Finally, Appellant has failed to provide any evidence to support Appellant's assertion that prior art does not inherently teach the claimed property.

U.S. Patent No. 6,867,287 in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569)

Claims 1-12 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-24 of U.S. Patent No. 6,867,287 in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569) Claim 1 recites a "continuous and homogeneous" region of chitosan "wherein at least 1 gram of said chitosan material is soluble in 100 grams of water at 25°C and one atmosphere."

The Appellants submit that Claim 1 is patentable over Claims 1-24 of U.S. Patent No. 6,867,287 in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569) because the references, when combined, fail to teach or suggest an absorbent member comprising at least one continuous and homogeneous region of chitosan material wherein at least 1 gram of the chitosan material is soluble in 100 grams of water at 25°C and one atmosphere.

Regarding the limitation of the chitosan material being soluble in 100 grams of water at 25 °C and one atmosphere to form a continuous and homogeneous region, appellant's arguments are not found persuasive as set forth above. However, claim 8 of the present invention indicates that chitosan salts meet this limitation. Since the '287 Patent is directed to chitosan salts in claim 4, it is reasonable to presume this limitation is inherent to that invention. Support for said presumption is found in the use of similar materials and methods. Kelkenberg explicitly teaches the use of commercially available chitosan containing 20% of acetylated amino groups having a molecular weight of 300,000 to

500,000. (See Col 2, 46-50) The commercially available chitosan should be employed as far as possible in the ground state with a particle size of $\leq 500 \mu\text{m}$. (See Col 3, lines 4-6) The chitosan is mixed with acid in order to make it soluble in cold water. (See Col 3, lines 29-42) Additionally, Kelkenberg discloses in Examples 1 and 3, Chitosan HCL Salt soluble in cold water (See Col 5, lines 40-52) and Chitosan Glycolic Acid Salt soluble in cold water thereby giving a clear solution. (See Col 6, lines 1-10) Kelkenberg also discloses that the use of hydroxy acids, such as lactic acid and glycolic acid form glass-clear gels in water. (See Col 3, lines 43-47) As such, the materials and methods of Kelkenberg have been shown to be similar to that of '287 Patent, the property of 100 grams of chitosan material being soluble in water at one atmosphere is inherently provided in the Kelkenberg product. The burden is upon the Appellant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. Finally, Appellant has failed to provide any evidence to support Appellant's assertion that prior art does not inherently teach the claimed property.

U.S. Patent No. 6,887,564 in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569).

Claims 1-12 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-21 of U.S. Patent No. 6,887,564 in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569) Claim 1 recites a "continuous and homogeneous" region of

chitosan "wherein at least 1 gram of said chitosan material is soluble in 100 grams of water at 25°C and one atmosphere."

The Appellants submit that Claim 1 is patentable over Claims 1-21 of U.S. Patent No. 6,887,564 in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569) because the references, when combined, fail to teach or suggest an absorbent member comprising at least one continuous and homogeneous region of chitosan material wherein at least 1 gram of the chitosan material is soluble in 100 grams of water at 25°C and one atmosphere.

Regarding the limitation of the chitosan material being soluble in 100 grams of water at 25 °C and one atmosphere to form a continuous and homogeneous region, appellant's arguments are not found persuasive as set forth above. However, claim 8 of the present invention indicates that chitosan salts meet this limitation. Since the '564 Application is directed to chitosan salts in claim 8, it is reasonable to presume this limitation is inherent to that invention. Support for said presumption is found in the use of similar materials and methods. Kelkenberg explicitly teaches the use of commercially available chitosan containing 20% of acetylated amino groups having a molecular weight of 300,000 to 500,000. (See Col 2, 46-50) The commercially available chitosan should be employed as far as possible in the ground state with a particle size of $\leq 500 \mu\text{m}$. (See Col 3, lines 4-6) The chitosan is mixed with acid in order to make it soluble in cold water. (See Col 3,

lines 29-42) Additionally, Kelkenberg discloses in Examples 1 and 3, Chitosan HCL Salt soluble in cold water (See Col 5, lines 40-52) and Chitosan Glycolic Acid Salt soluble in cold water thereby giving a clear solution. (See Col 6, lines 1-10) Kelkenberg also discloses that the use of hydroxy acids, such as lactic acid and glycolic acid form glass-clear gels in water. (See Col 3, lines 43-47) As such, the materials and methods of Kelkenberg have been shown to be similar to that of '564 Patent, the property of 100 grams of chitosan material being soluble in water at one atmosphere is inherently provided in the Kelkenberg product. The burden is upon the Appellant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. Finally, Appellant has failed to provide any evidence to support Appellant's assertion that prior art does not inherently teach the claimed property.

U.S. Patent Application No. 11/021,634 in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569)

Claims 1-12 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application 11/021,634 in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569) Claim 1 recites a "continuous and homogeneous" region of chitosan "wherein at least 1 gram of said chitosan material is soluble in 100 grams of water at 25°C and one atmosphere."

The Appellants submit that Claim 1 is patentable over Claims 1-20 of copending Application No. 11/021,634 in view of Kellenberger et al. (U.S. Patent No. 4,699,823) and Sackmann et al. (U.S. Patent No. 5,635,569) because the references, when combined, fail to teach or suggest an absorbent member comprising at least one continuous and homogeneous region of chitosan material wherein at least 1 gram of the chitosan material is soluble in 100 grams of water at 25°C and one atmosphere.

Regarding the limitation of the chitosan material being soluble in 100 grams of water at 25 °C and one atmosphere to form a continuous and homogeneous region, appellant's arguments are not found persuasive as set forth above. However, claim 8 of the present invention indicates that chitosan salts meet this limitation. Since the '634 Application is directed to chitosan salts in claim 4, it is reasonable to presume this limitation is inherent to that invention. Support for said presumption is found in the use of similar materials and methods. Kelkenberg explicitly teaches the use of commercially available chitosan containing 20% of acetylated amino groups having a molecular weight of 300,000 to 500,000. (See Col 2, 46-50) The commercially available chitosan should be employed as far as possible in the ground state with a particle size of $\leq 500 \mu\text{m}$. (See Col 3, lines 4-6) The chitosan is mixed with acid in order to make it soluble in cold water. (See Col 3, lines 29-42) Additionally, Kelkenberg discloses in Examples 1 and 3, Chitosan HCL Salt soluble in cold water (See Col 5, lines 40-52) and Chitosan Glycolic Acid Salt soluble in cold water thereby giving a clear solution. (See Col 6, lines 1-10) Kelkenberg also discloses that the use of hydroxy acids, such as lactic acid and glycolic acid form glass-

clear gels in water. (See Col 3, lines 43-47) As such, the materials and methods of Kelkenberg have been shown to be the similar to that of Application '634, the property of 100 grams of chitosan material being soluble in water at one atmosphere is inherently provided in the Kelkenberg product. The burden is upon the Appellant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. Finally, Appellant has failed to provide any evidence to support Appellant's assertion that prior art does not inherently teach the claimed property.

U.S. Patent Application No. 10/785,277 in view of Kellenberger et al. (U.S. Patent No. 4,699,823)

Claims 1-12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of copending Application No. 10/785,277 in view of Kellenberger et al. (U.S. Patent No. 4,699,823)

We ask the Board to summarily affirm the rejection since it was not argued by Appellant.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/AITrev C Sykes/

Examiner, 5/28/09

/Jennifer Michener/

QAS, TC1700

Director Designee

Conferees:

/D. Lawrence Tarazano/

Supervisory Patent Examiner, Art Unit 1794

/Callie E. Shosho/

Supervisory Patent Examiner, Art Unit 1794